WELCOME

Agenda	
Times	**Item/Speakers**
10:00am – 10:20am	• *Opening remarks* - **Michael Rutter** (Deputy Director, Business Energy Use, BEIS) • *Presentation on Clean Growth Strategy's 20% ambition* - **Ben Golding** (Director, Energy Efficiency and Local Directorate, BEIS)
10:20am – 11:10am	*External speakers:* • *'SME Energy Efficiency Market Barriers & Opportunities'* **Hilary Wood** (EEVS) • *'BEES survey analysis'* - **John Murray** (Programme Manager for Resource Efficient Scotland, Ricardo Energy & Environment)
11.10am – 11.30am	Coffee
11:30am – 12:20pm	• *Scope of competition* - **Jon Saltmarsh**, (Science & Innovation for Climate Energy, BEIS) • *Application process and evaluation criteria, terms and conditions* - **Lisa Groves** (Ricardo Energy & Environment)
12:20pm – 12:50pm	*Next Steps and Q&A Session*: • **Michael Rutter** (Business Energy Use Team, BEIS) • **John Murray** (Ricardo Energy & Environment) • **Julie-Anne De Thomasis** (Procurement, BEIS) • **Lisa Groves** (Ricardo Energy & Environment) • **Jon Saltmarsh** (Science & Innovation for Climate & Energy, BEIS)
13:00pm – 14:00pm	Lunch and networking

Boosting Access for SMEs to Energy Efficiency (BASEE) Competition

20 March 2019
Information Event Day

Ben Golding, Director

Energy Efficiency & Local Directorate

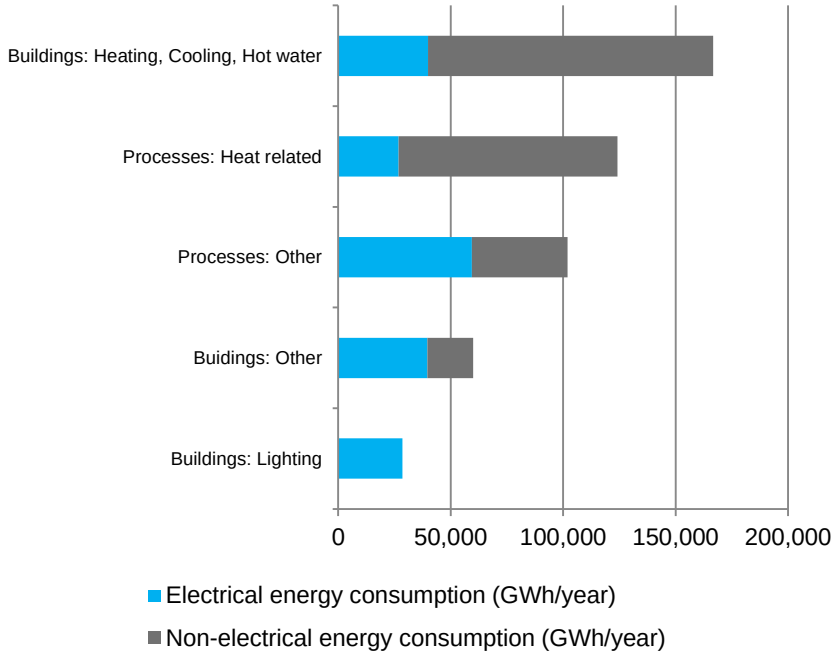
Clean Growth Strategy

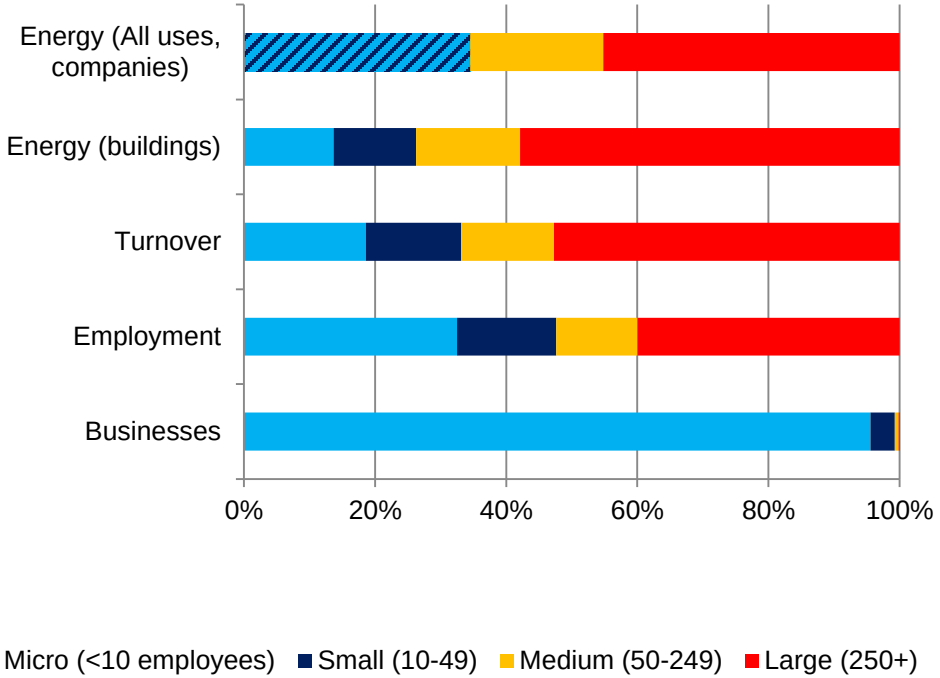
- The Clean Growth Strategy sets an ambition to improve business productivity by enabling businesses to improve their energy efficiency by at least 20 per cent by 2030.

- This means that energy use would need to fall by 20% and energy intensity by 45% in 2030 compared to 2015 levels.

- This will deliver:
  - Up to £6bn in cost savings for businesses
  - Carbon savings of up to 22 MtCO2e

Business energy demand





Heating and cooling in buildings are the biggest sources of energy use, followed by energy used in industrial processes.

Optimisation of building energy use can deliver energy savings of up to 20% or even more.

SMEs comprise about half of energy demand in this sector – although they account for over 90% of businesses.

We therefore need to target our interventions on these areas.

Department for Business, Energy & Industrial Strategy

SMEs

- SMEs account for 99% of businesses in the UK and are responsible for over 50% of energy use.
- Budget 2018 committed to a Call for Evidence on introducing a new energy efficiency scheme focused on small business. This was published alongside the Spring Statement.

Helping businesses with energy use

- Call for Evidence in July 2018 sought views on how to deliver the 20% ambition.
- A Government response was published on the 13th March 2019 which set out proposals and approaches in the non-domestic energy services market:
- **Launch of the £6m Boosting Access for SMEs to Energy Efficiency**.
- Taking forward options to address issues around trust, standards and quality assurance.
- Having better quality energy consumption data.
- Participate in the Retrofit Standard Task Group, an output of the EHC quality and standards workstreams.

Policy approach – realising the 20%

1. Energy Savings Opportunity Scheme (ESOS).
2. Private Rented Sector for non-domestic buildings, tightened Minimum Energy Efficiency Standard (MEES) and potentially action on owner occupied buildings.
3. Streamlined Energy and Carbon Reporting.
4. **Boosting Access for SMEs to Energy Efficiency (BASEE) Competition.**
5. Call for evidence on an SME energy efficiency scheme.
6. Industrial Heat Recovery Support (IHRS) Programme.
7. Support for Industrial Energy Efficiency.
8. Buildings Mission.

Boosting Access for SMEs to Energy Efficiency (BASEE) Competition

The **aim** of the Boosting Access for SMEs to Energy Efficiency Competition is to accelerate the growth of the energy services market for SMEs by driving down transaction costs and promoting third party finance in energy efficiency projects.

£6m of funding for new, innovative scalable business models or solutions that reduce costs, simplify processes and encourage the take-up of energy efficiency by SMEs at scale.

We know that SMEs face barriers that are particular to them such as:

- lack of economies of scale;
- high upfront capital costs;
- high transaction costs; and
- difficulty accessing finance.

Objectives of the competition

Are to develop profitable business models or solutions that:

- Increase demand for investment in EE and growth in the market for high quality EE services for SMEs;
- Increase investment from lenders;
- Lower transactional costs through standardised and/or streamlined approaches to contracting;
- Generate a supply chain of projects;
- Deliver successful approaches to financing small energy efficiency retrofits; and
- Show how the aggregation of small projects can deliver efficiency.

Outcomes:

BASEE has the potential to increase the take-up of EE measures by SMEs leading to reduced energy demand and delivering carbon savings.

Next steps

My colleagues here today will be available to answer any questions you may have.

We will be having a Q&A session just before lunch.

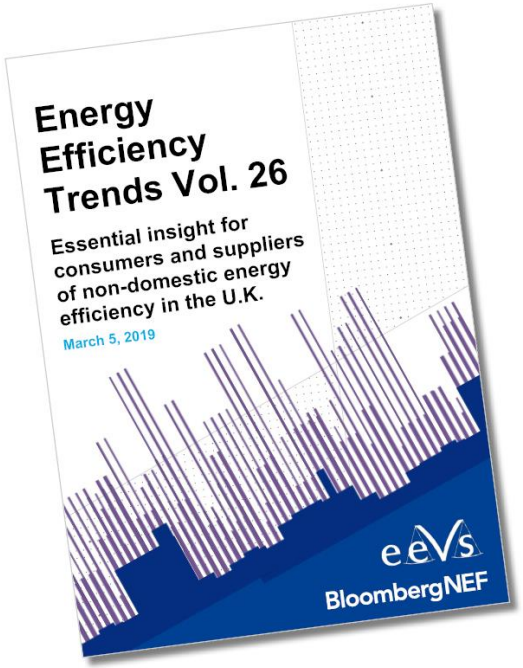
If you are interested in this competition you should register your interest by emailing BASEE@ricardo.com to ensure that you are kept up to date as the scheme progresses.

SME Energy Efficiency Market Barriers & Opportunities

BEIS BASEE COMPETITION LAUNCH – 20/03/2019

About EEVS

- Advisory (EE investment due diligence & performance management)
- Performance measurement (M&V) service provision (evaluation / verification)
- Professional Training
- Policy / market support and research
- Market information via *Energy Efficiency Trends* initiative



About the QualitEE project

Quality Assurance for **Energy Efficiency Services**

Trust | Standardisation | Simplification

Working in the U.K. with:

EPCg ESTA ENERGY PERFORMANCE CONTRACTING group

SCOTTISH FUTURES TRUST

AMBER INFRASTRUCTURE GROUP

INVESTOR CONFIDENCE PROJECT

Define Quality Assessment Criteria

Test in Pilot Projects

'Kick – Start' Quality Assurance Scheme

2018

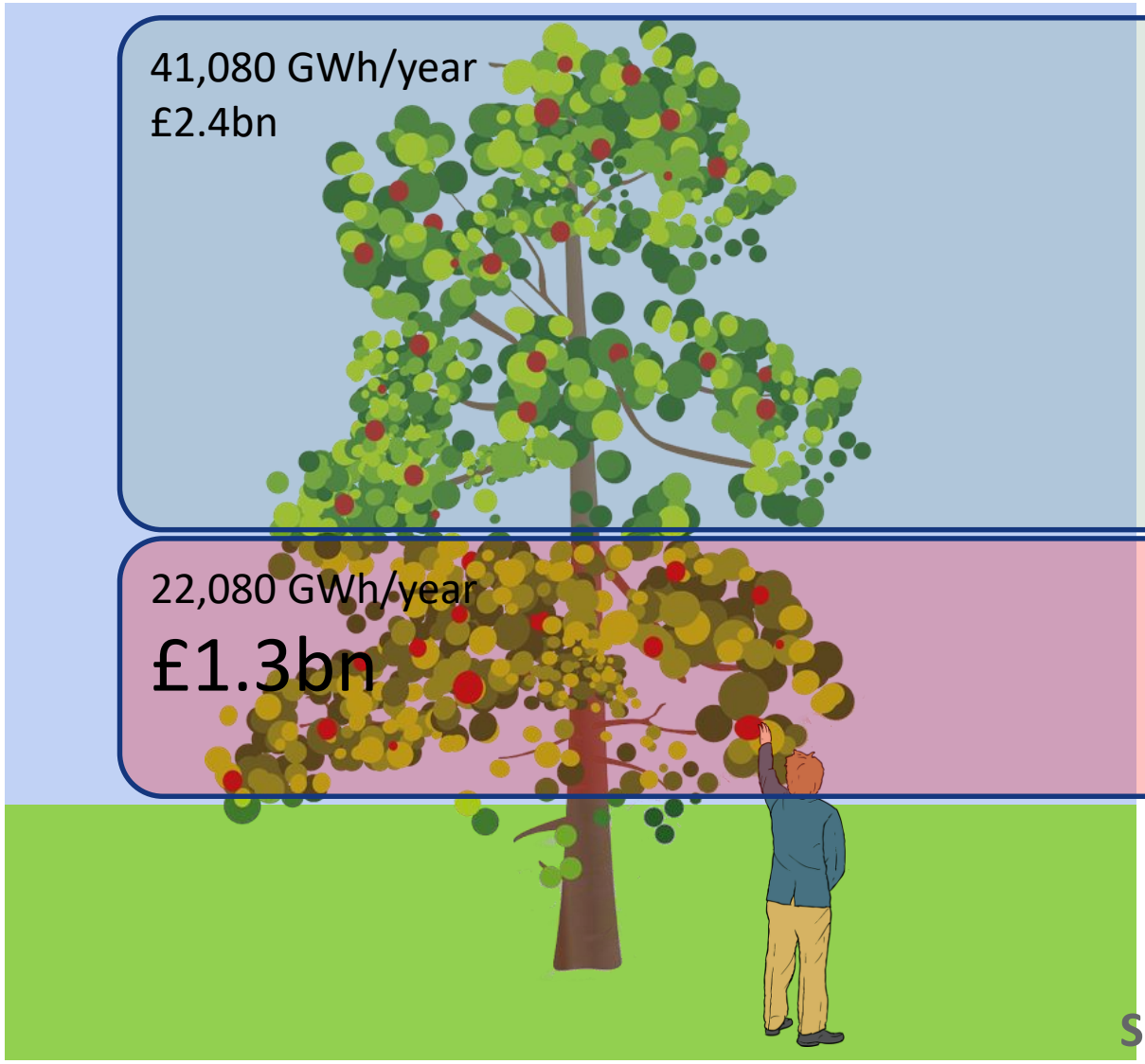
2019

2020

European Commission Disclaimer

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 754017.

The Opportunity



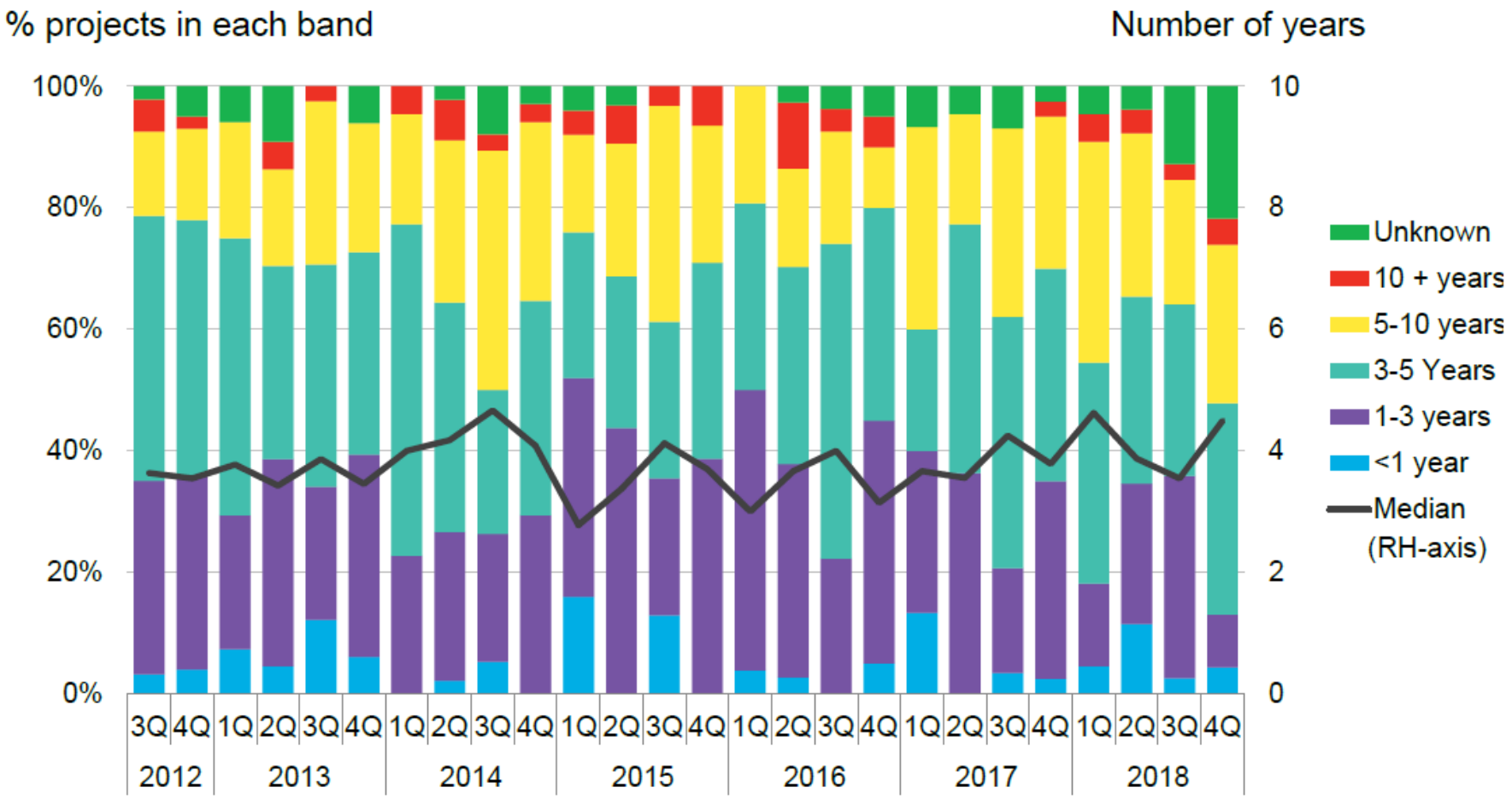
3 years

Payback

Source: BEIS Building Energy Efficiency Survey

What‘s Low & What‘s High?

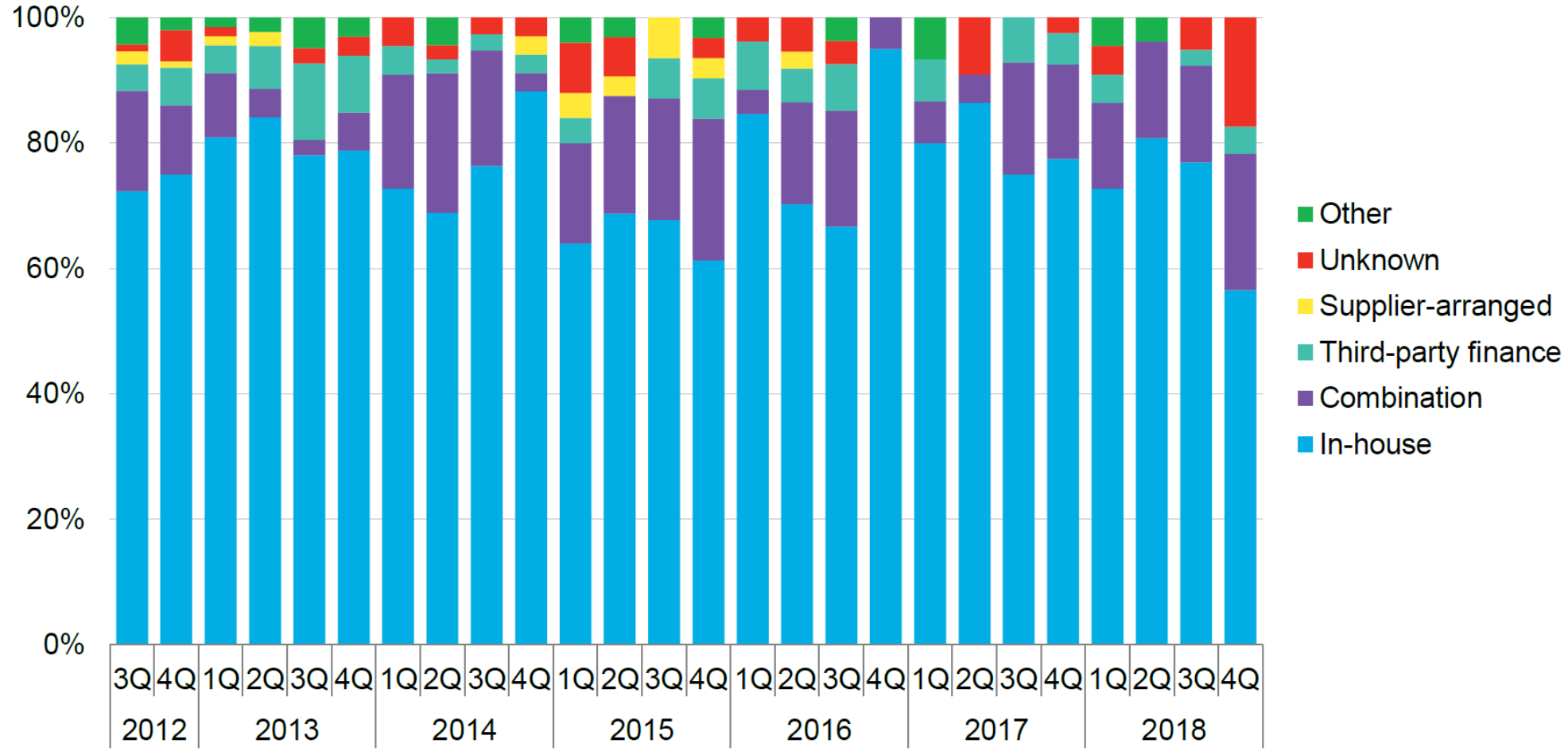
Figure 17: Trends in expected payback periods



Source: EEVS / BloombergNEF *Energy Efficiency Trends* Vol.26

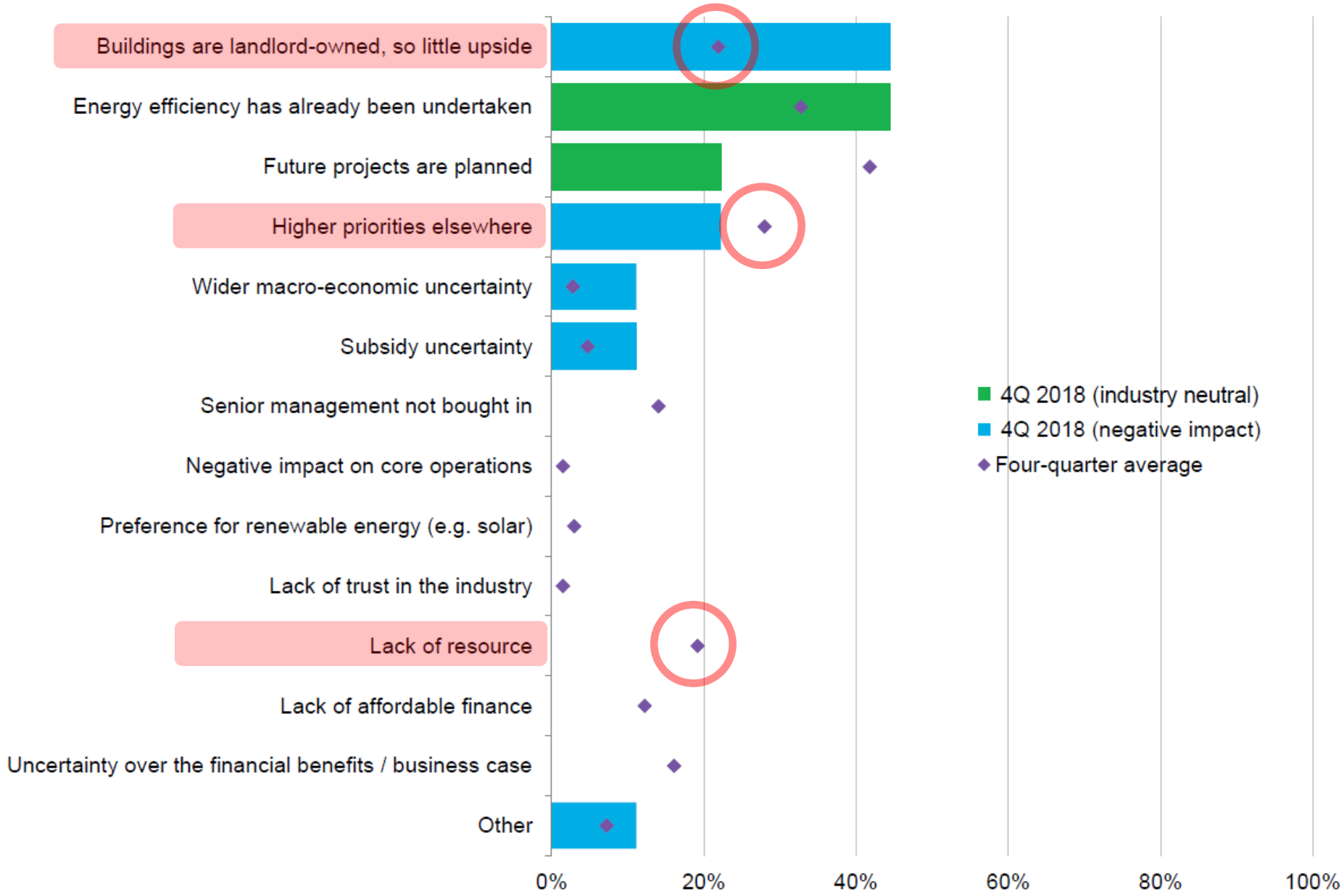
Who‘s money?

Figure 16: Trends in finance models



Why not?

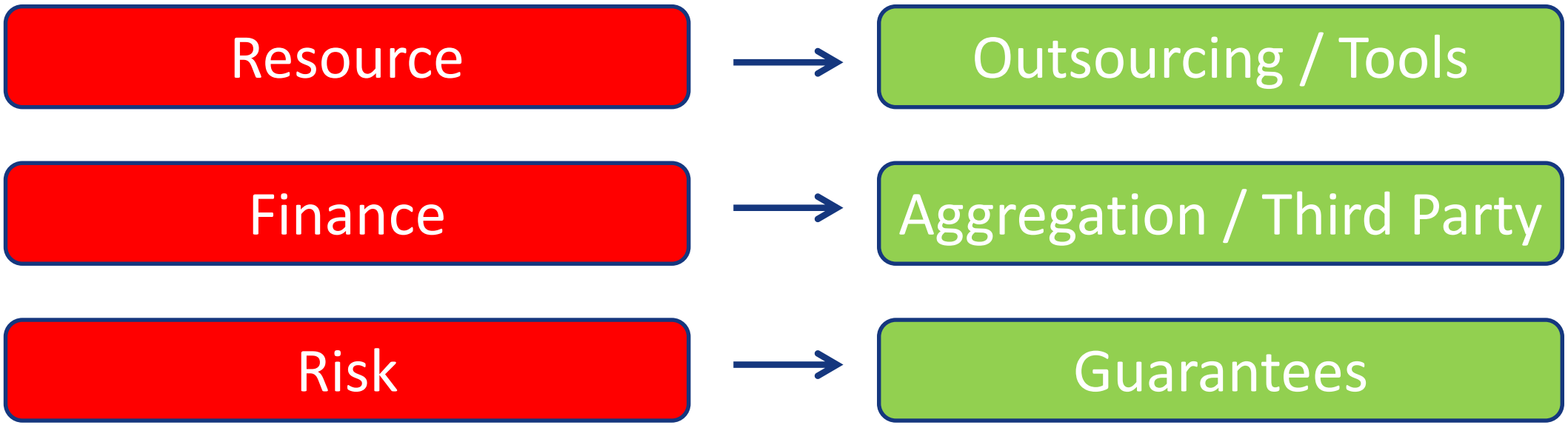
Figure 19: Consumer reasons for lack of efficiency uptake, 4Q 2018 versus four-quarter average



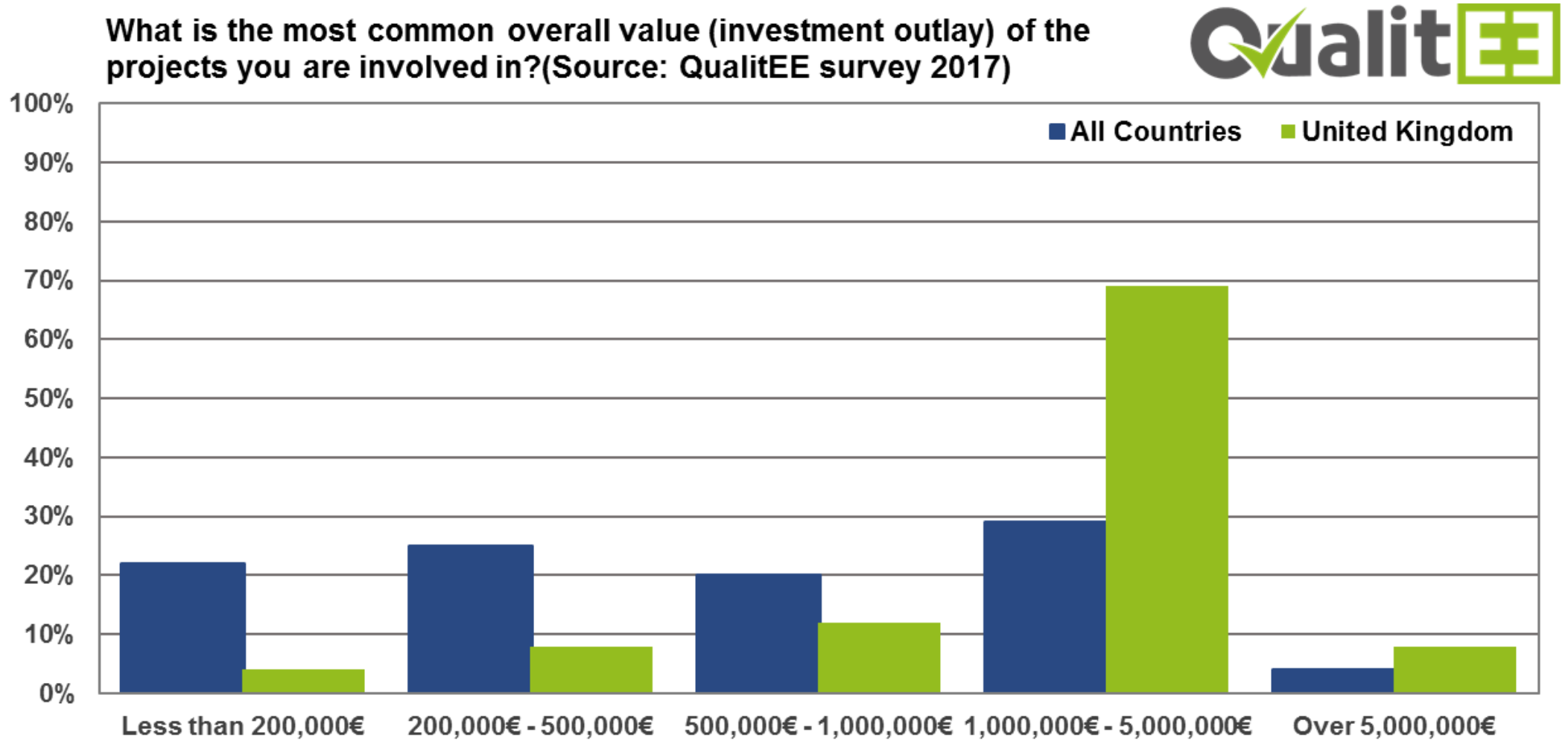
Summary of Barriers

- Resource
- Finance
- Risk

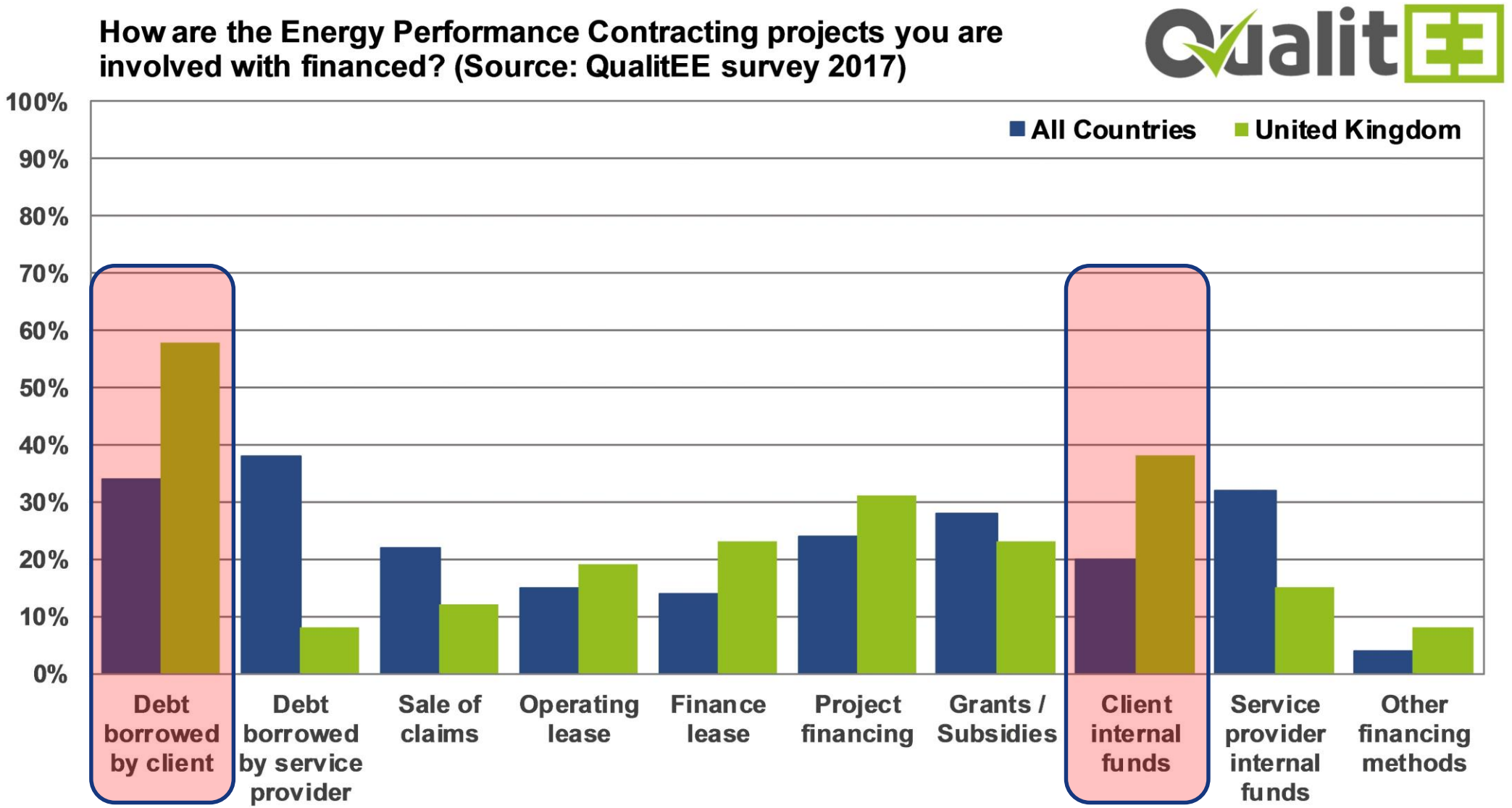
Where are the opportunities?



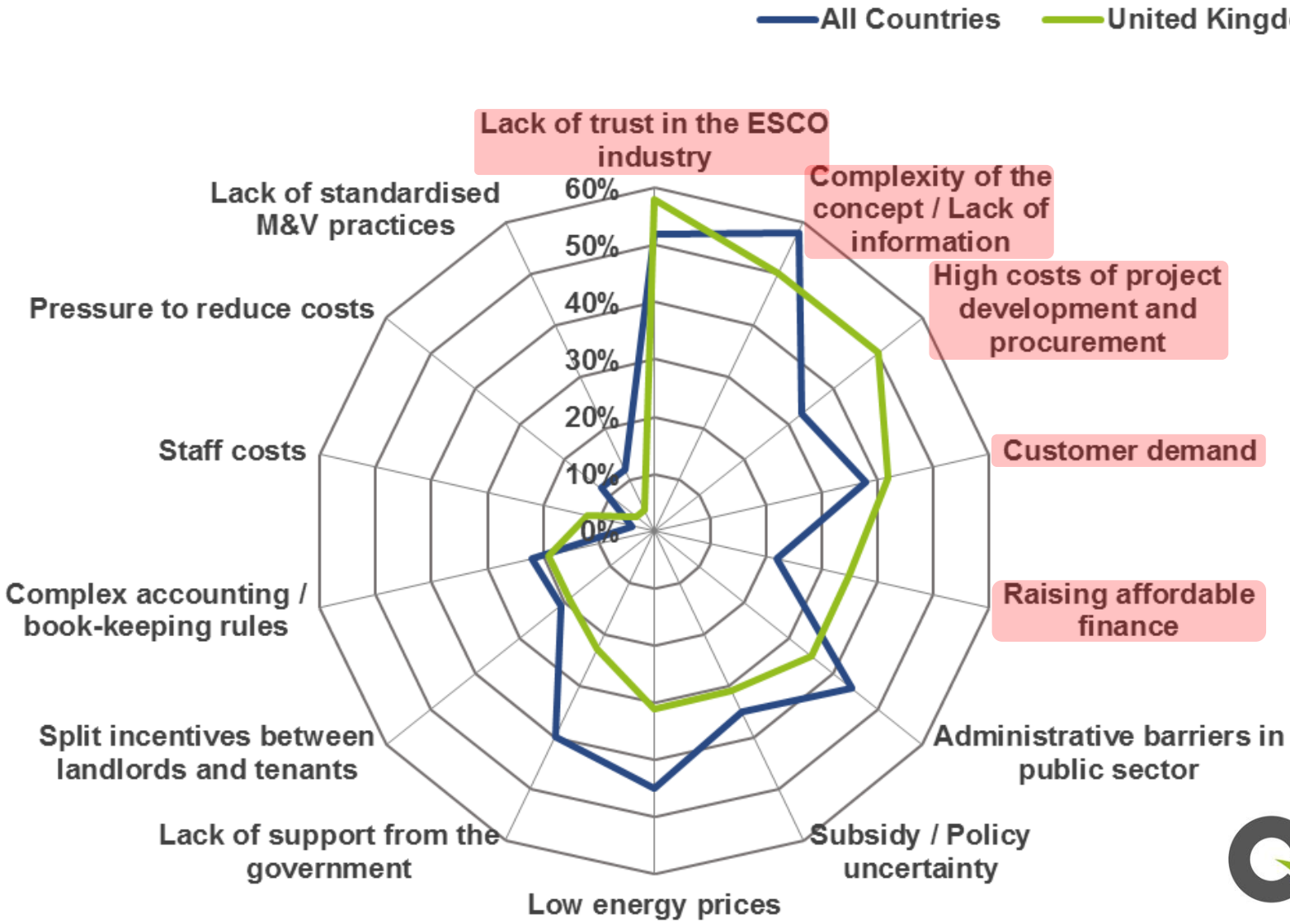
Project sizes for Energy Efficiency Services



Financing for Energy Efficiency Services



What are the barriers to EE Services?



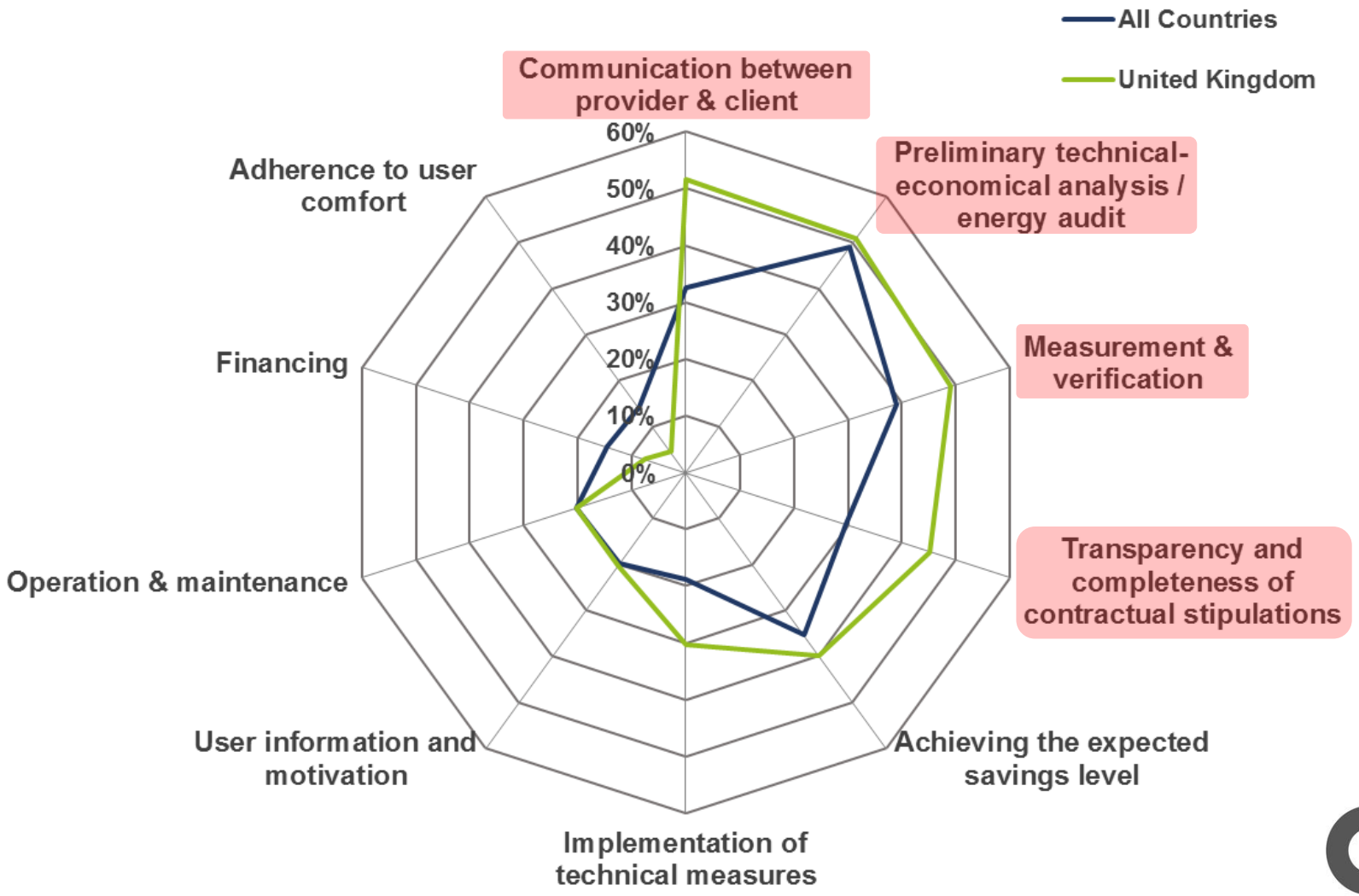
The role of quality assurance

Quality Assurance

- Standardisation → Facilitates aggregation
- Simplification → Reduces development costs
- Consumer Trust → Improves Customer Demand

Draft quality guidelines - https://qualitee.eu/publications/draft-guidelines-of-european-quality-criteria/

What‘s important / needs improvement?



Thank you

Useful Links

EEVS / BloombergNEF *Energy Efficiency Trends*
www.energyefficiencytrends.com

QualitEE Project
www.qualitee.eu

QualitEE UK Market Research Report
https://qualitee.eu/gb/publications/market-research-report/

Hilary Wood
hilary.wood@eevs.co.uk
www.eevs.co.uk

Ricardo
Energy & Environment onment

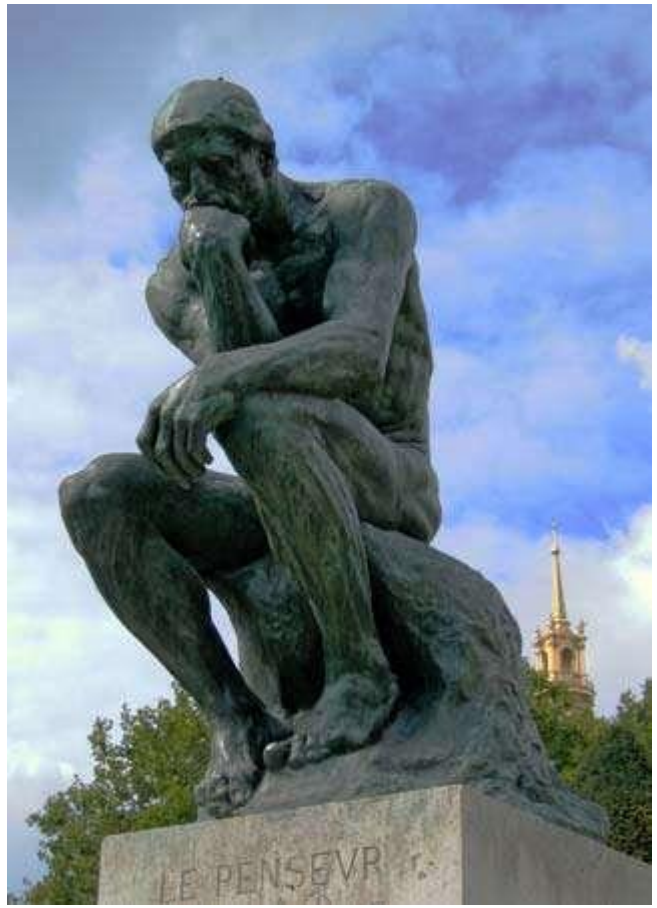
BEES survey analysis

John Murray, Programme Manager
20th March

Agenda

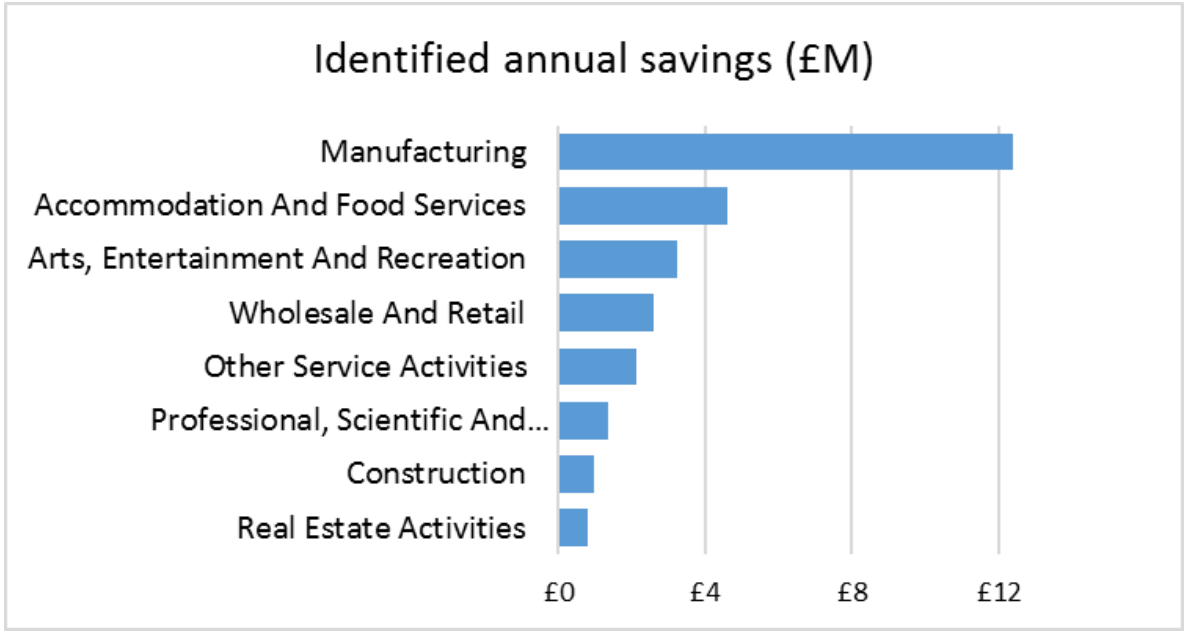
Overview of the BEES report:

- Non-domestic stock
- Energy consumption
- Abatement potential
- Barriers
- Conclusions



Non-domestic stock - overview

- The BEES report excludes industrial energy use.
- The non-domestic stock in England and Wales comprises 1.83 million premises, of which 1.57 million were within the scope of BEES analysis.
- Around 50% of non-domestic buildings are SMEs.
- The most significant SME sectors for energy are Retail, Offices, Hospitality, Industrial, Storage and Community, arts and leisure.



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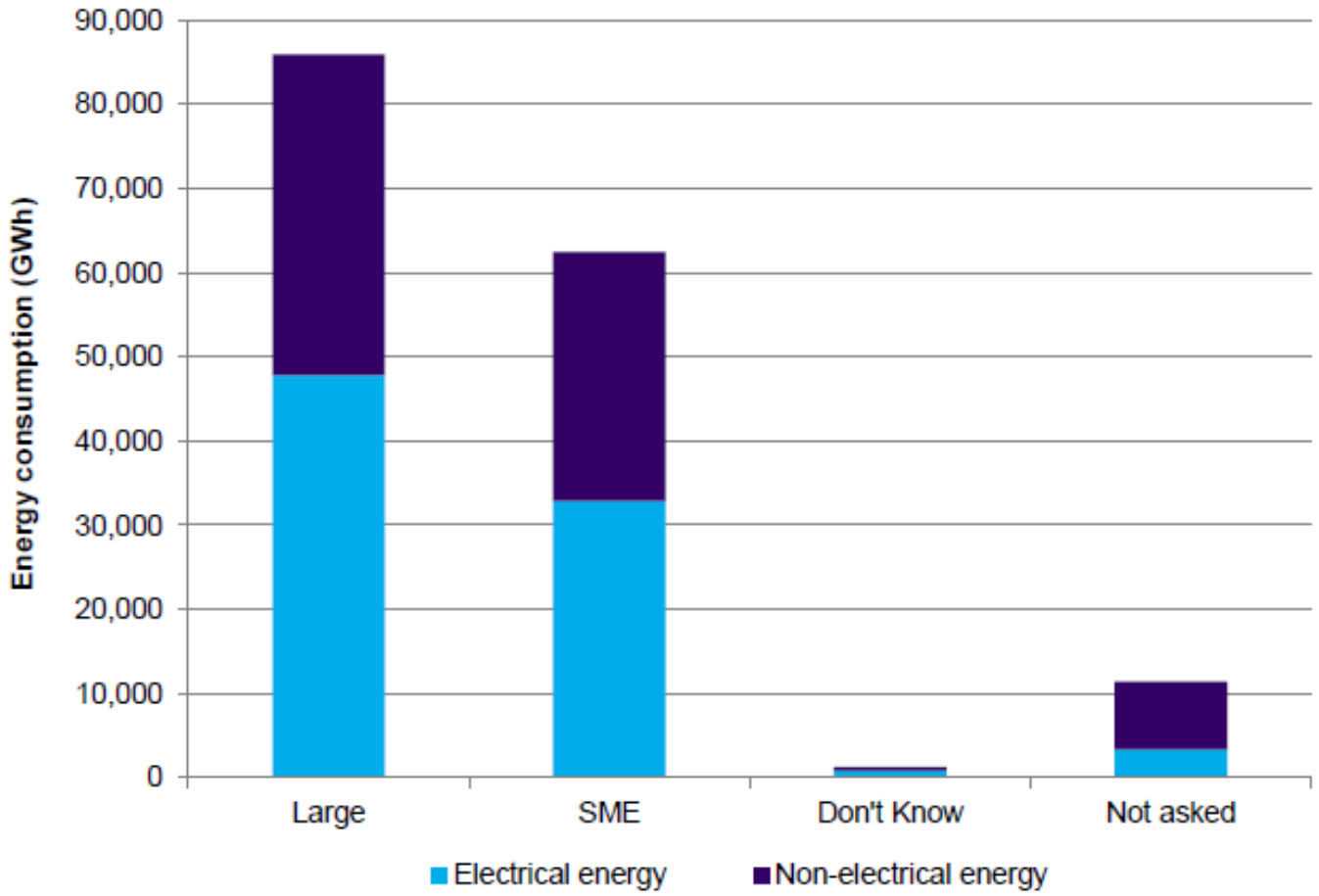
- Around 50% of non-domestic buildings are SMEs.
- The most significant SME sectors for energy are Retail, Offices, Hospitality, Industrial, Storage and Community, arts and leisure.
- Around half the SME floor area is rented.
- Gas heating dominates the heated flor space.
- The SME sectors have 1/3 of floor area electrically heated.
- For SME sectors, electric heating has an equivalent carbon impact to gas.

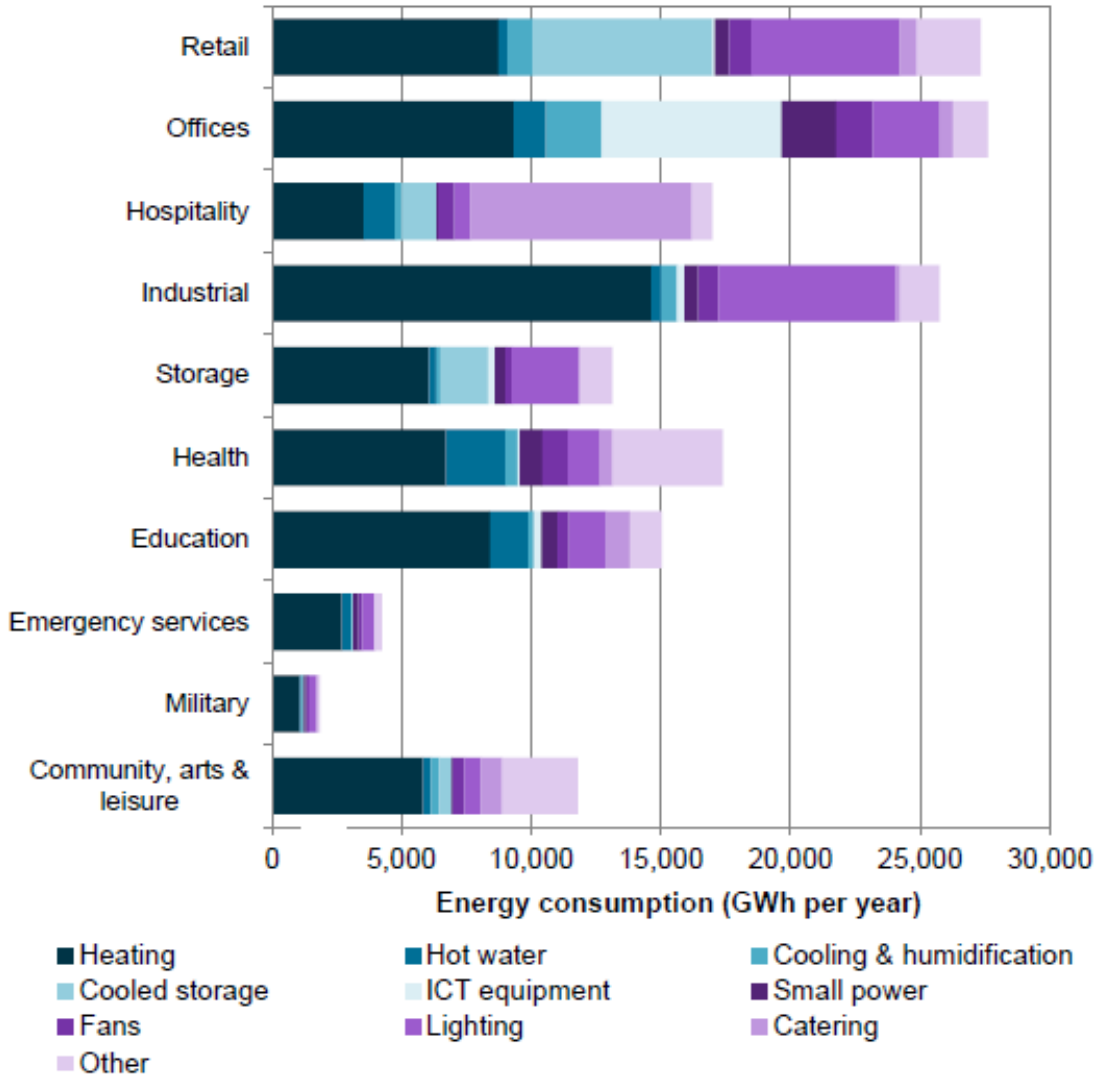
Energy consumption

Figure 3.16: Energy consumption by organisation size and energy type, 2014–15



Energy consumption

Figure 3.10: Energy consumption by energy end use and sector, 2014–15



Energy consumption - management

Table 3.12: Energy consumption by private or public sector, energy management resource and energy management ambition, 2014–15

Sector grouping	Energy management ambition	Energy management resource: Specialist energy manager	Non-specialist energy manager	No energy manage-ment	Not asked/ Don't know	Total
All	Active	35%	18%	3%	-	**56%**
	Passive	14%	12%	8%	-	**34%**
	None	1%	1%	3%	-	**6%**
	Not Asked	-	-	-	4%	**4%**
	Total	**50%**	**31%**	**15%**	**4%**	**100%**
Public	Active	51%	11%	1%	-	**64%**
	Passive	20%	9%	4%	-	**33%**
	None	1%	1%	2%	-	**3%**
	Not Asked		-	-	-	**0%**
	Total	**72%**	**21%**	**7%**	**-**	**100%**
Private	Active	30%	20%	3%	-	**53%**
	Passive	12%	13%	10%	-	**35%**
	None	2%	1%	4%	-	**7%**
	Not Asked	-	-	-	6%	**6%**
	Total	**43%**	**34%**	**17%**	**6%**	**100%**

Energy consumption - management

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	Passive	20%	9%	4%	-	**33%**
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	Not Asked	-	-	-	-	**0%**
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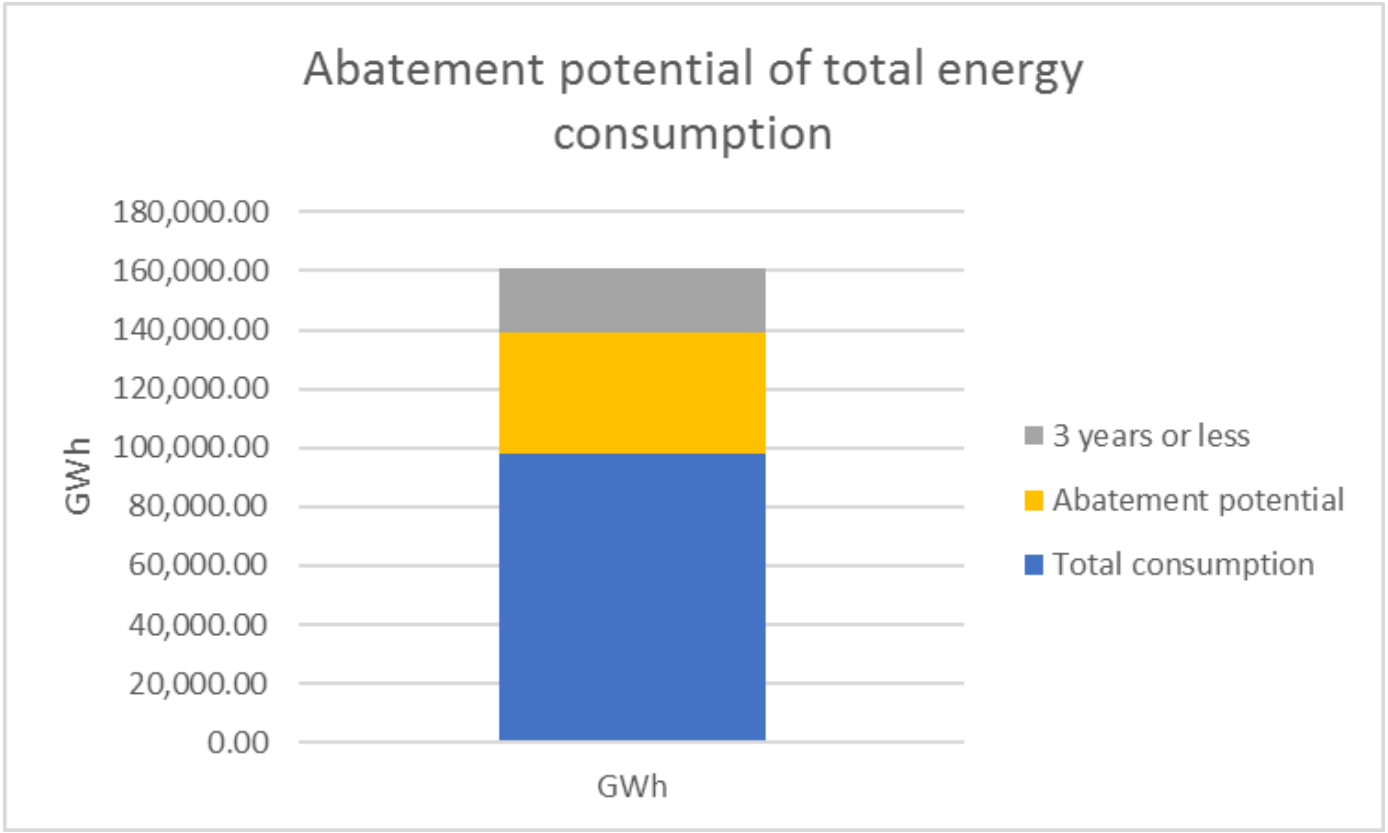
	Passive	12%	13%	10%	-	**35%**
	None	2%	1%	4%	-	**7%**
	Not Asked	-	-	-	6%	**6%**
	Total	**43%**	**34%**	**17%**	**6%**	**100%**

Abatement potential

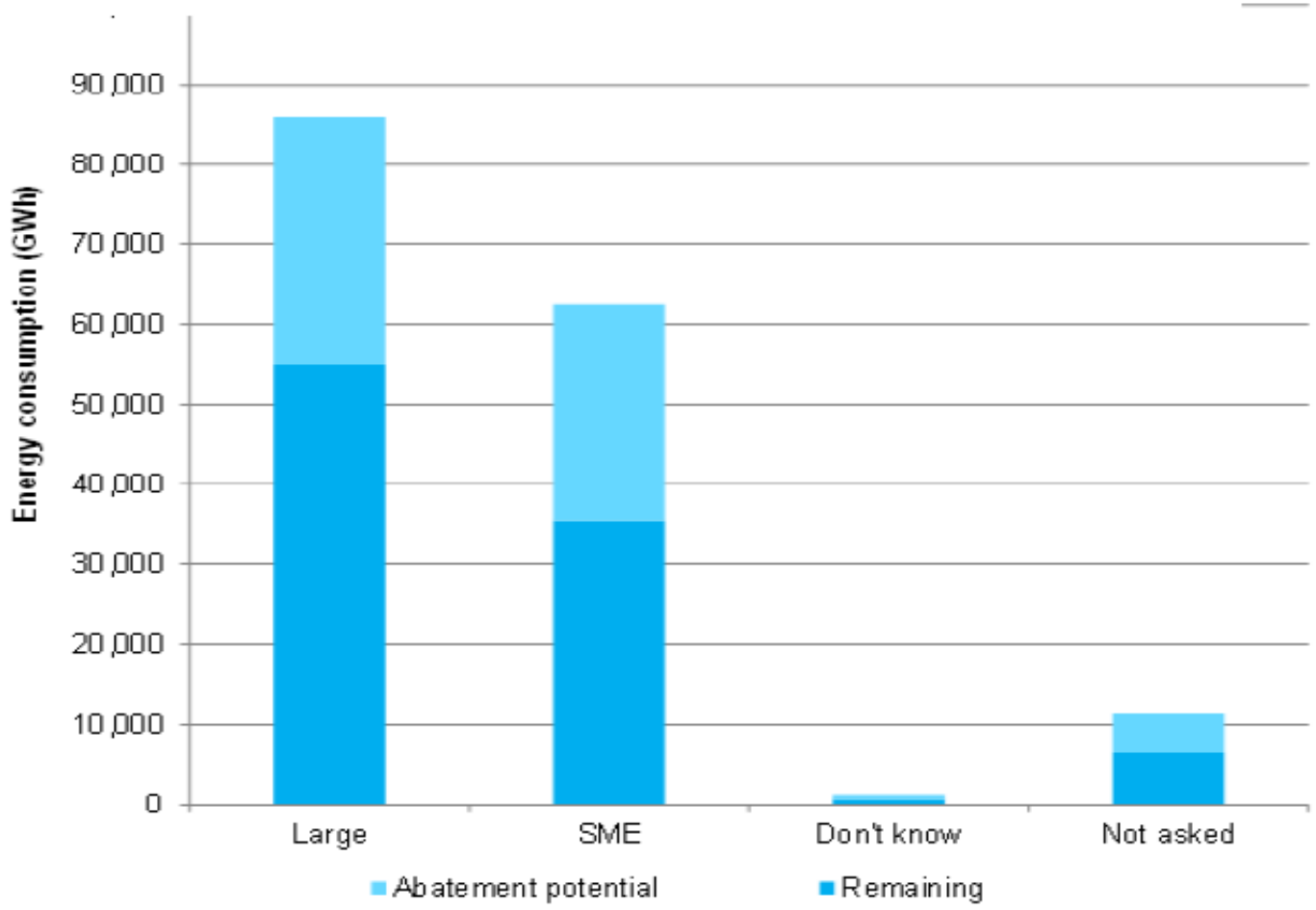
Abatement potential

- The technical abatement potential for the non-domestic stock is 63,160 GWh.
- 22,080 GWh/year came from measures with a payback of three years or less.

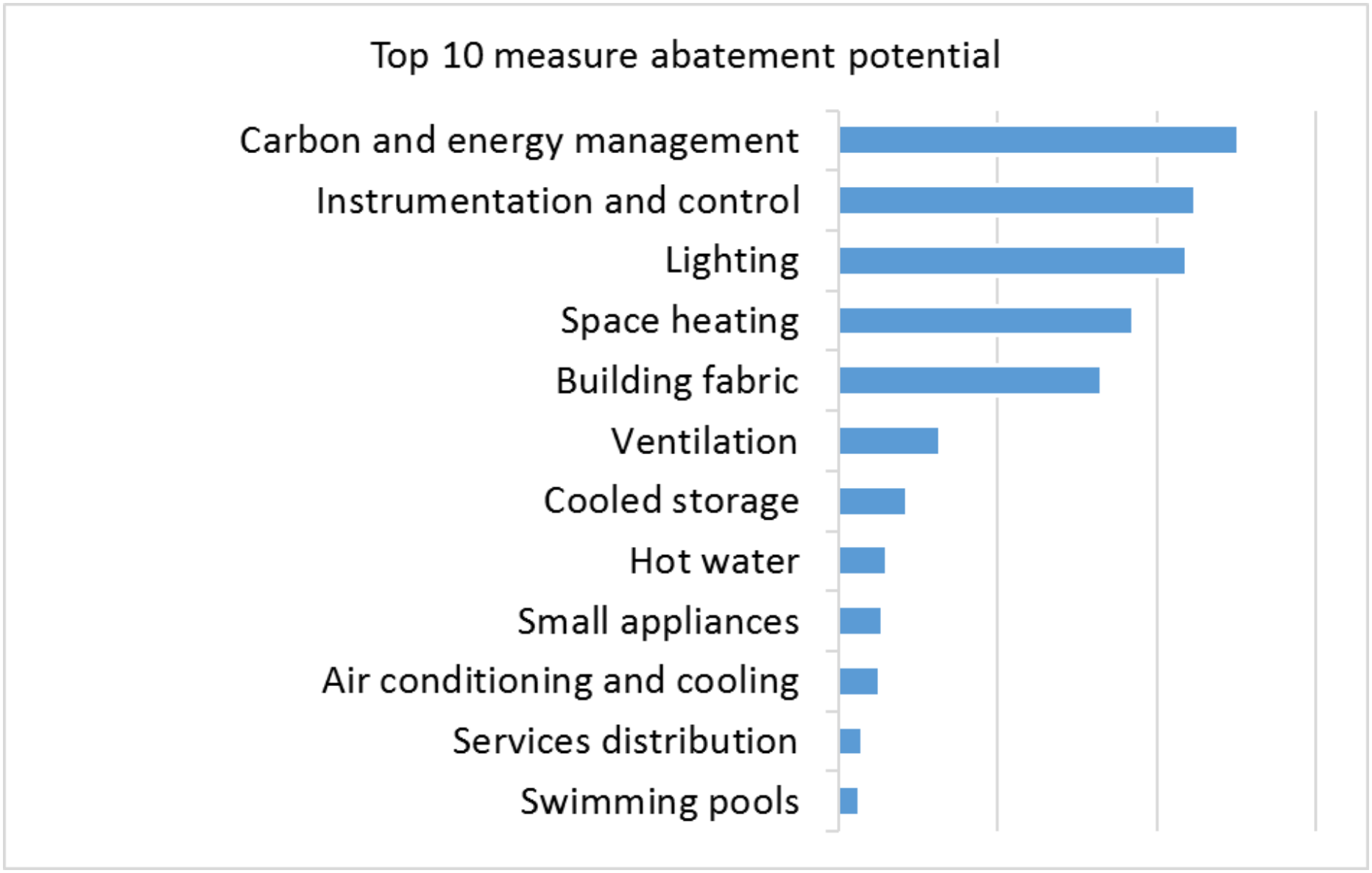


Abatement potential

Figure 4.2: Abatement potential by organisation size, 2014–15



Abatement potential



Abatement potential

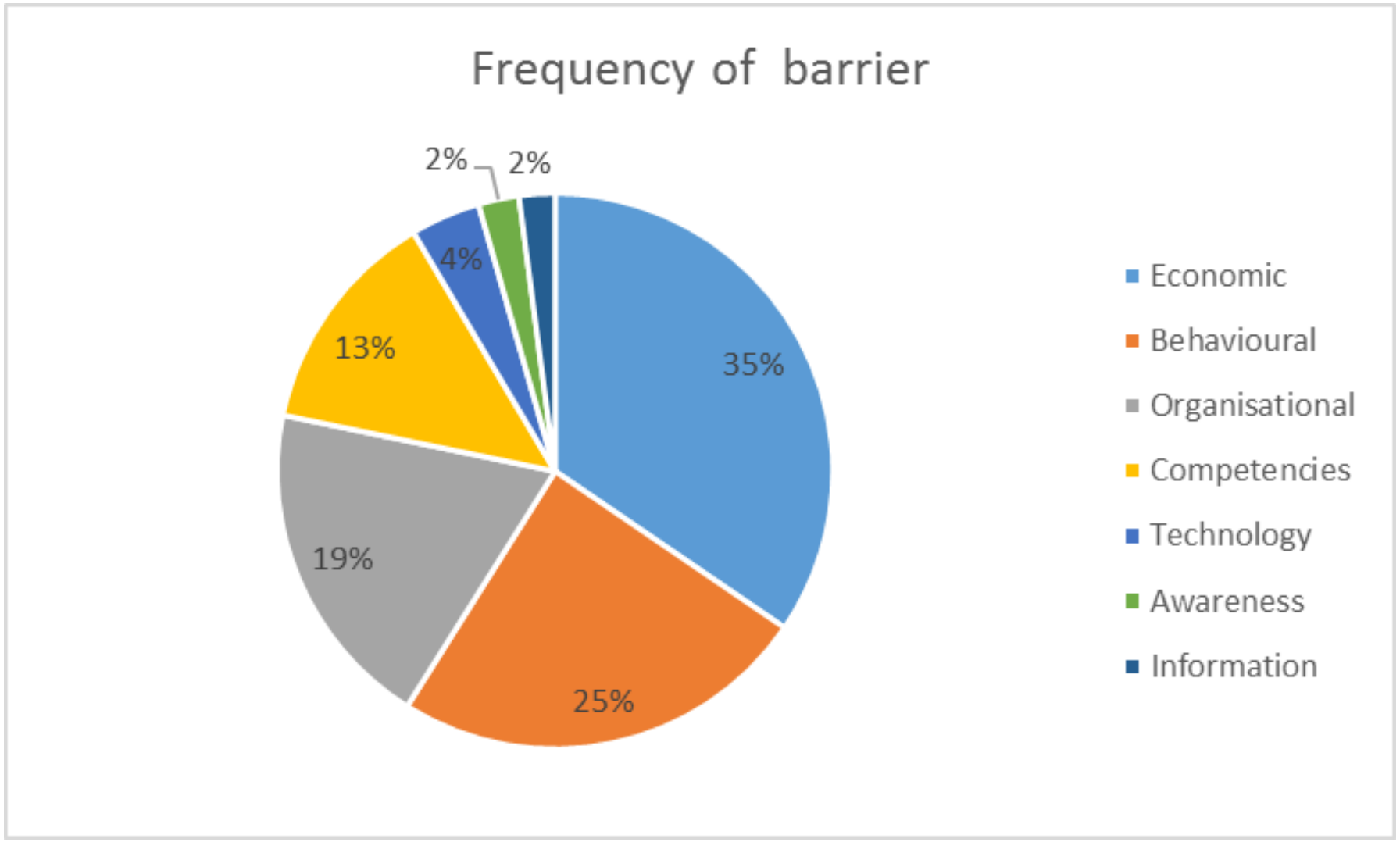
- Carbon and energy management
  - Awareness campaigns
  - HVAC maintenance
  - Improve sub-metering
  - Procurement
  - Energy management
  - Keeping external doors shut (retail)
  - Reduced use of air curtains (retail)
  - Minimise simultaneous operation of heating and cooling systems

- Building instrumentation and control
  - BMS installation, re-commissioning and maintenance
  - Energy meters
  - Heating zone controls
  - Time controls on the heating system
  - Weather compensator controls on heating
  - Time control on hot water system
  - Lift maintenance

Barriers

Figure 5.1: Barrier word cloud

Barriers


Frequency of barrier
2%
2%
4%
13%
35%
19%
25%
Economic
Behavioural
Organisational
Competencies
Technology
Awareness
Information

Barriers

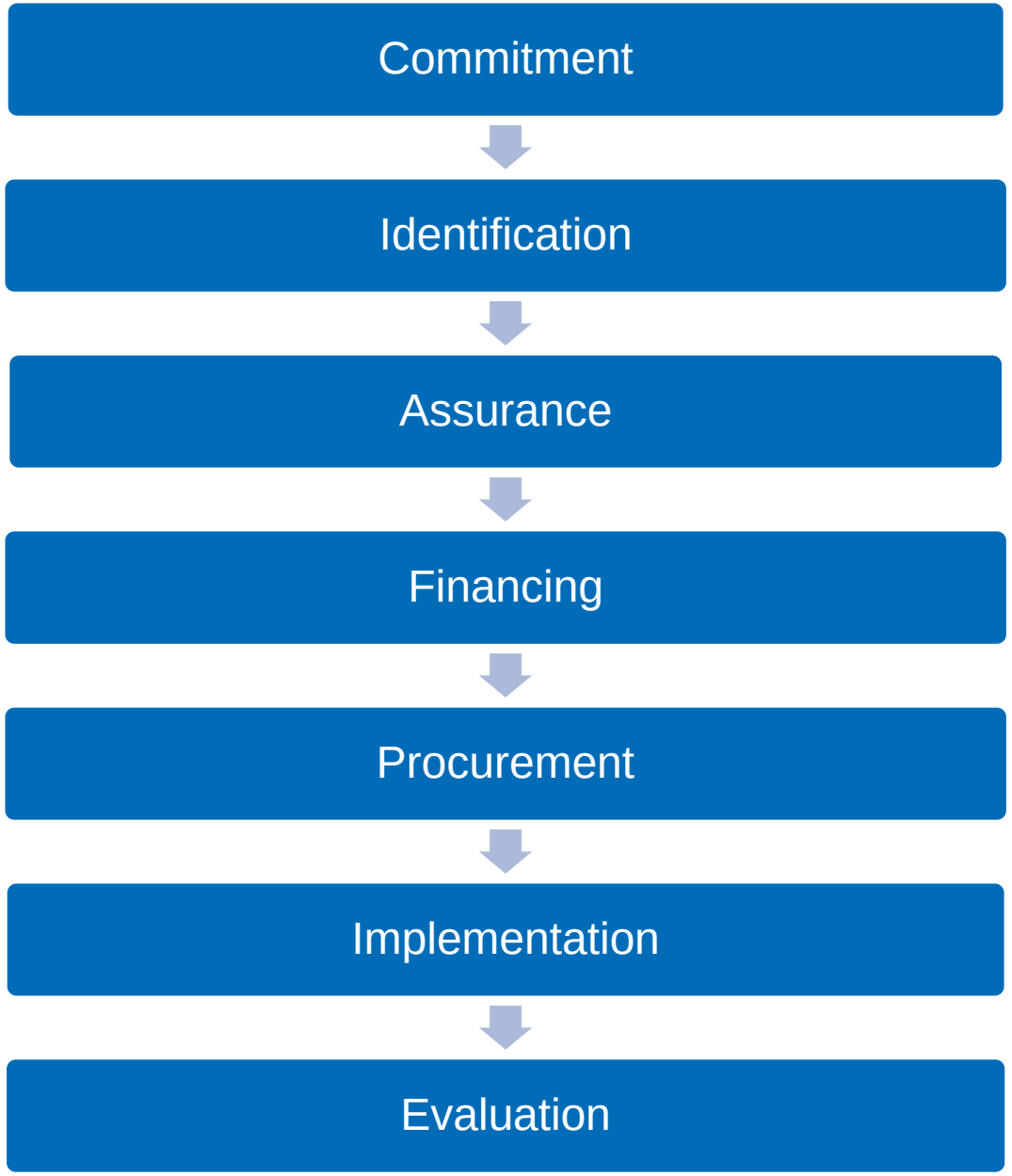
- The most commonly perceived barriers were economic ones:
  - Low capital availability.
  - Investment costs.
  - Hidden costs.
  - Intervention-related risks.
  - External risks.
  - Interventions not sufficiently profitable.

Barriers

- The most commonly perceived barriers were economic ones:
  - Low capital availability.
  - Investment costs.
  - Hidden costs.
  - Intervention-related risks.
  - External risks.
  - Interventions not sufficiently profitable.

- The most commonly cited enablers were:
  - Improved energy management knowledge.
  - Increased availability of funding.
  - Greater buy in from key internal and external stakeholders.

Barriers



Conclusions

- SMEs contribute significantly to the UK energy consumption.
- SME Energy Managers often have multiple roles.
- SMEs have a similar abatement potential to large organisations but you have to engage many individuals in SMEs to achieve a similar impact.
- Carbon and energy management and building instrumentation and control have significant abatement potential but come with longevity challenges.
- Economic barriers are most commonly stated however organisations face multiple barriers.
- Enterprises identify a broad range of enablers because they face multiple barriers.
- SMEs can take a long time to implement measures.
- SMEs are often averse to taking on debt even where there is a good business case.
- Economic barriers can be overcome where there is better understanding of the wider benefits.

Questions?

BASEE Competition Scope

Jon Saltmarsh
Head of Built Environment Technology and Systems
Science & Innovation for Climate and Energy

Research Background to the Competition

- BEIS commissioned IPA Advisory and Databuild (July 2018) to carry out research into the non-domestic energy efficiency services market to increase our understanding of the current market, how it compares internationally and the barriers to further growth.
- Identified barriers such as lack of trust, lack of salience and low financial returns and high transaction costs.
- Found that cost reduction is the strongest driver to help take-up of energy service solutions in the private sector market.

Aim of the Competition

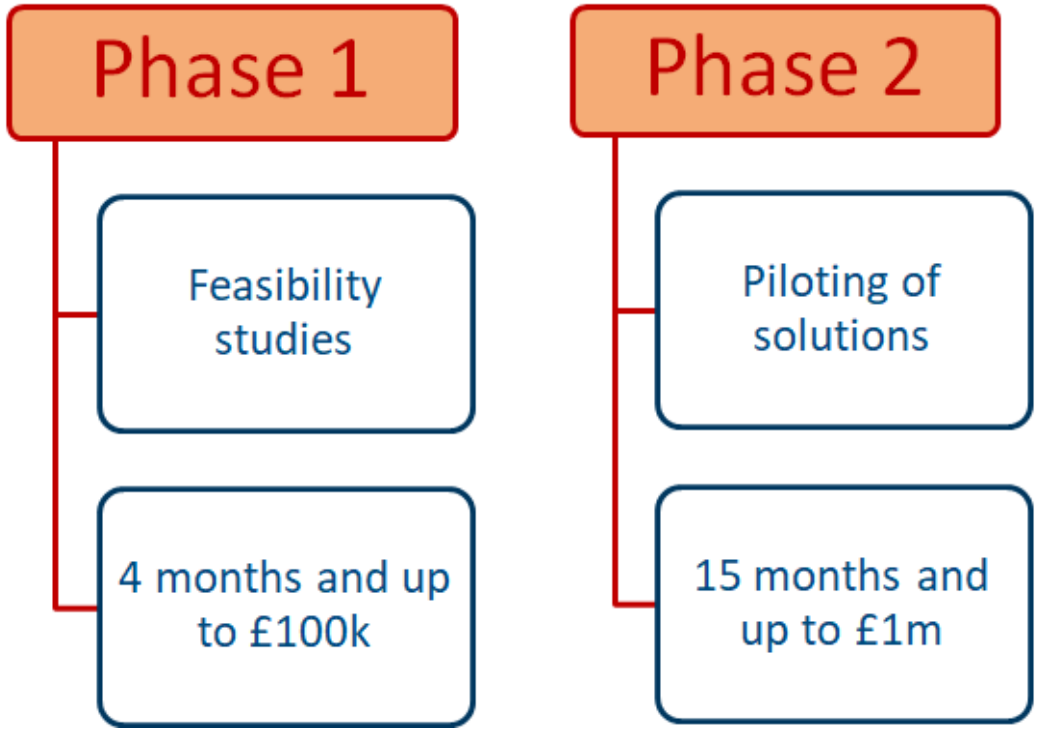
- The aim of the BASEE Competition is to accelerate the growth of the energy services market for SMEs by driving down transaction costs and promoting third party investment in energy efficiency projects.
- The BASEE competition aims to pilot the most promising business models or solutions that:
  - Increase demand for investment in EE and growth in the market for high quality EE services for SMEs;
  - Increase investment from lenders;
  - Lower transactional costs through standardised and/or streamlined approaches to contracting;
  - Generate a supply chain of projects.

Categories

- Projects are envisaged to fall broadly into three categories:
  - **Business models** that look to simplify and standardise elements of the investment; or
  - **A new technical tool/solution**, such as a platform which provides a standardised method of assessing and displaying potential savings from a portfolio of buildings, or to match potential businesses who want to install energy efficiency with technology providers.
  - **Other innovative solutions** to facilitate investment in energy efficiency for SMEs.

Outline of the Competition

- The competition will be run as a Small Business Research Initiative (SBRI) and will be split into 2 Phases.



You must pass Phase 1 to be eligible for Phase 2

Scope

1 APPLICANT

2 TECHNICAL

3 ACTIVITY

4 SECTORAL

1. Applicant scope - who can apply

- SBRI competitions are **open to all organisations** that can demonstrate a route to market their solution. This includes SMEs and large enterprises, academic, research, public and third sector organisations.
- This competition is UK wide and wants to draw on the widest possible pool of innovative ideas that support UK businesses.

We would welcome applications from the following organisations (though this list is not exhaustive):

Energy service companies	Security/smart control firms
Energy Supplier or utilities	Aggregators
Energy efficiency technology providers	Trade bodies
Financial organisations such as banks	Local org. such as LEPs, local energy hubs
Investors/portfolio managers	Local authorities
Facility management contractors	

2. Technical Scope

In Scope	Out of scope – funding will not be provided for…
• Not prescriptive about specific projects. • Encourage a wide range of ideas to come forward. • Supportive of proposals that develop, test and demonstrate business models, processes and tools. • Funding for this competition will be awarded using the Small Business Research Initiative (SBRI) approach.	• The delivery or development of energy efficiency technologies. • A project proposed by an organisation which is already active in delivering its proposed solution. • Solutions targeting the same site with buildings owned by a single owner. • Projects that require additional post-scheme development before being ready for market testing.

3. Activity Scope

In Scope	Out of Scope - funding will not be provided for…
• Projects that facilitate investment in physical changes to the energy efficiency of the building/equipment within the building. • Will consider projects that include aspects that are outside immediate scope of the competition (if necessary for commercial viability)	• Behavioural change measures • Investments in more efficient industrial/manufacturing equipment. • Projects aimed at energy efficiency in new builds or public sector buildings. • Projects aimed at investing in one building or site – i.e. they are not scalable or replicable.

4. Sectoral Scope

- We are aiming to fund projects that can demonstrate market potential within an SME sector.
- Projects which target public sector organisations are explicitly out of scope.

Next Steps for BASEE

Applications	
Deadline for submitting bids	8 May 2019
Webinar	Tuesday, 26 March
Phase 1	
Feasibility studies period	Summer 2019
Phase 2	
Pilot phase	Late 2019 – 31st March 2021

What We Are Looking For

- This is an innovation project – it's OK to fail (but we want you to succeed)
- Novelty – there's more to energy efficiency than replacing lighting
- Potential to scale up – how widely can the approach be applied
- Additionality – why does government need to fund this
- Deliverability – do we have confidence the bidder can deliver
- Credibility – real understanding of how to overcome barriers

Contact Details

- If you are interested in this competition you should register your interest by emailing BASEE@ricardo.com to ensure that you are kept up to date as the scheme progresses.

Application process & evaluation criteria.
Terms and Conditions.

Lisa Groves (Ricardo Energy & Environment)

Application process

Milestone	Planned completion date
Competition launch	13 March 2019
Supplier information day	20 March 2019
Deadline for questions from applicants.	3 April 2019
Deadline whereby BEIS will respond to all applicants' questions	15 April 2019
Deadline for expressions of interest	24 April 2019
Deadline for submission of proposals	8 May 2019
Project selection and Phase 1 contracts awarded	July 2019
Competition participants commence work on Phase 1	August 2019
Assessment of Phase 1 outputs to decide which projects to proceed to Phase 2	November 2019
Phase 2 contracts awarded	December 2019
Final report from participants	31 March 2021

Application process

- Submit expression of interest to BASEE@ricardo.com by 13.00 on 24th April 2019
- Submit full application to BASEE@ricardo.com by 17.00 on 8th May 2019
  - Completed application form
    - Work plan
    - Project budget
    - Risk assessment
    - Any co-funding arrangements
  - Declaration forms
- There is only 1 application window
- **You must pass Phase 1 to enter Phase 2**

Presentation of proposed budgets

- Total value of BASEE = £6million
  - Phase 1: Max of £100k per project (including VAT where applicable)
  - Phase 2: Max of £1m per project (including VAT where applicable)
- Eligible costs/activities
- Ineligible costs/activities
- ‘Bundled’ projects that include other out-of-scope activities
- Workplan – all project activities, reports and payments MUST be complete by 31 March 2021

Evaluation of proposals

- Eligibility assessment
  - The project must be within the competition scope;
  - The project must be at a pre-commercial stage of development in the UK;
  - The project activities for any feasibility study procured in this Competition must be conducted in the UK;
  - The project must be led by a single organisation (although bids from consortia with a single lead partner are acceptable);
  - The application must clearly describe activities for both Phase 1 and Phase 2;
  - The application must clearly indicate the estimated cost savings in line with SBRI requirements;
  - The requested funding must be below the maximum limit of £100k for Phase 1 activities and £1million for Phase 2.

Evaluation of proposals

Criterion	Weighting	Sub-criteria
Technical approach / Innovation (25%)	15%	Credibility of the concept and relevance to the specific challenges and objectives being addressed
	10%	Degree of innovation of the proposal, and the market gap it is filling including the added value compared to existing activities.
Market potential, scalability and marketing plan (20%)	5%	Overall market size in terms of annual value & potential customers (including targeted sector and measure types where applicable). Evidence of market research activities.
	10%	Potential for scalability within and/or across sectors as measured by the potential level of commercial advancement as a result of the project. Assessment of target market potential, including costings (products and services), installation, customer acquisition..
	5%	Strength of the strategic plan to commercialise the product. Business case for roll out and commercialisation, including early commercialisation deployment targets. Includes potential financing options for further commercialisation

Evaluation of proposals

Criterion	Weighting	Sub-criteria
Deliverability (20%)	5%	Appropriateness and credibility of the project work plan, milestones and deliverables.
	5%	Appropriateness of project management structure and partners roles.
	5%	Current status of the project and ability to start and deliver work within BASEE timescales
	5%	Detailed understanding of the project risks and their management
Skills and expertise (10%)	5%	Evidence of track record of project delivery
	5%	Capacity, experience and capability of the proposed project team members

Evaluation of proposals

<table>
<tr><th>Criterion</th><th>Weighting</th><th>Sub-criteria</th></tr>
<tr><td rowspan="2">Costs

(25%)</td><td>5%</td><td>Robustness of detailed project costing for Phase 1, including justification of the costs.</td></tr>
<tr><td>20%</td><td>Total cost for Phase 1 activities

The lowest priced bid will receive the full 5 marks, all other bids will then be marked as set out below.

<u>Proportionate pricing scoring example</u>
<table>
<tr><th>Applicant</th><th>Price</th><th>Marks</th></tr>
<tr><td>1 (lowest bid)</td><td>£60,000</td><td>5</td></tr>
<tr><td>2</td><td>£80,000</td><td>60/80 * 5 =3.75</td></tr>
<tr><td>3</td><td>£100,000</td><td>60/100 * 5 = 3</td></tr>
</table></td></tr>
</table>

Evaluation of proposals

- To pass through to the ranked list of applications, you must score a minimum of 60% against the assessment criteria
- Funding allocation across categories:
  A. **Business models and standardisation**
  B. **New technical tool**
  C. **Other innovative solutions**

  The top two scoring applications from each category will be allocated funding (giving a total of 6 projects) and then the next overall top scoring applications will be allocated until the available funds are used up.

Terms & Conditions

- BASEE is a pre-commercial SBRI procurement
  - Standard SBRI T&Cs apply
- Intellectual Property
- Payment of invoices
- Treatment of VAT
- Monitoring and Reporting
- Evaluation

Next Steps and Q&A Session

Thank you